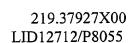## Abstract

A circuit for blending video signals and subpicture signals is provided. The circuit includes a palette to output at least one subpicture value based on a palette index. The circuit also includes an alpha-blend unit coupled to the subpicture palette to blend a set of luminance values of a video signal with a set of luminance values of a subpicture signal in one pass and to blend a set of chrominance values of a video signal with a set of chrominance values of the subpicture signal in a separate pass, the luminance and chrominance values are provided to the alpha-blend unit in a planar format. The video signals may be provided and blended in a YUV 4:2:0 format. In addition, a single dual-purpose palette can be used for both texturing and alpha-blending.

5